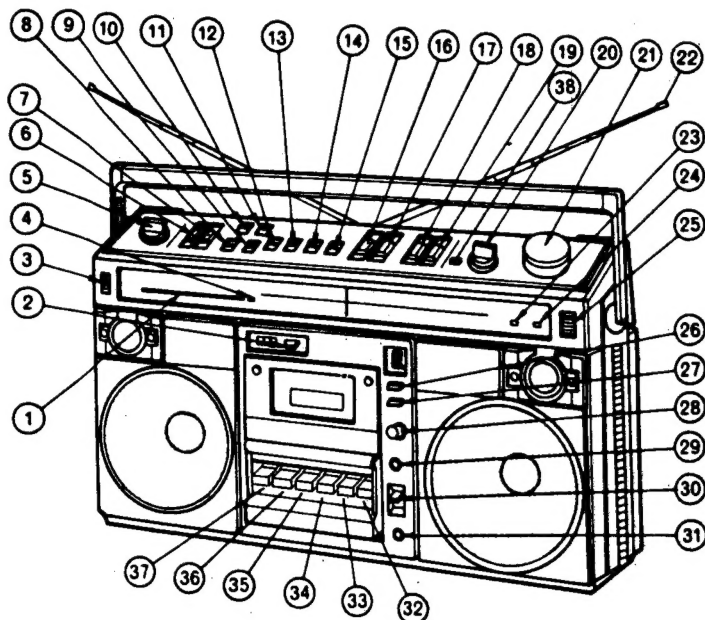




HITACHI

SERVICE MANUAL

TK
No. 1490E
TRK-8290E, E(BS)


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KEY TO ILLUSTRATIONS

① LED LEVEL INDICATOR	②① BAND SELECTOR
② TAPE COUNTER	②② TUNING CONTROL
③ BUILT-IN MICROPHONE (LEFT)	②③ TELESCOPIC ANTENNA (AERIAL)
④ DOLBY NR INDICATOR	②④ FM STEREO INDICATOR
⑤ FUNCTION SELECTOR	②⑤ OPERATION INDICATOR
⑥ RECORDING LEVEL CONTROL (LEFT)	②⑥ BUILT-IN MICROPHONE (RIGHT)
⑦ RECORDING LEVEL CONTROL (RIGHT)	②⑦ PROGRAM SWITCH
⑧ RECORDING MUTE SWITCH	②⑧ PROGRAM RESET SWITCH
⑨ DOLBY NR SWITCH	②⑨ MIXING VOLUME CONTROL
⑩ AUTO/MANUAL RECORDING CHANGE-OVER SWITCH	②⑩ MIXING MIC SOCKET
⑪ MODE SWITCH	③① TIMER STAND BY BUTTON
⑫ TAPE SELECTOR SWITCH (BIAS)	③② HEADPHONE SOCKET
⑬ TAPE SELECTOR SWITCH (EQUALIZER)	③③ PAUSE BUTTON
⑭ LEVEL INDICATOR SELECTOR	③④ FAST FORWARD/CUE BUTTON
⑮ RIF/AFC SWITCH	③⑤ PLAYBACK BUTTON
⑯ BASS CONTROL	③⑥ REWIND/REVIEW BUTTON
⑰ TREBLE CONTROL	③⑦ RECORD BUTTON
⑱ VOLUME CONTROL (LEFT)	③⑧ STOP/EJECT BUTTON
⑲ VOLUME CONTROL (RIGHT)	③⑨ LOUDNESS SWITCH

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

CASSETTE TAPE RECORDER WITH FM/SW/MW/LW RADIO

February 1981

TOKAI WORKS

SAFETY PRECAUTION

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makes. Critical parts are marked with \triangle in the schematic diagram, and circuit board diagram.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SPECIFICATIONS

GENERAL SECTION

Semi-conductors :	IC's : 11
	Transistors : 33
	Diodes : 26
	LED's : 18
	Varicap : 1
	Varistors : 3
Power (Mains) Supply :	AC : 220V 50 Hz (For E) 240V 50 Hz (For E (BS))
	DC : 13.5V (IEC R20×9)
	Car : Use car battery cord
Power Consumption :	24W
Dimensions :	540(W)×304(H)×166(D)mm
Weight :	7.6kg (with batteries)
Power output :	9W/CH (Max.), 5W/CH (THD 10%)
Speaker :	16cm, 2.8 ohms×2 5cm, 4 ohms×2

TUNER SECTION

Circuit System :	FM/SW/MW/LW 4-band superheterodyne
Tuning Range :	FM : 87.5 to 108 MHz SW : 6.0 to 18 MHz MW : 530 to 1605 kHz LW : 150 to 350 kHz
Sensitivity :	FM : 10 dB (pra.) 2 dB (max.) SW : 25 dB (pra.) 20 dB (max.) MW : 42 dB (pra.) 30 dB (max.) LW : 52 dB (pra.) 40 dB (max.)
Intermediate Frequency :	FM : 10.7 MHz SW/MW/LW : 468 kHz

Antennas (Aerials) :

FM/SW : Telescopic antenna
or External antenna
MW/LW : Ferrite-core antenna

TAPE RECORDER SECTION

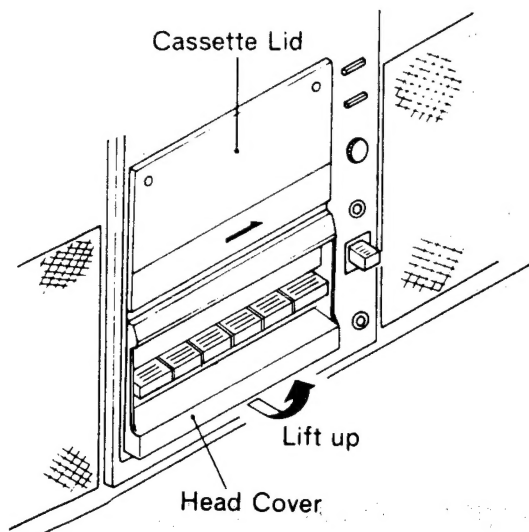
Tape :	Cassette tape (C-30, 60, 90)
Tape Speed :	4.75cm/sec.
Recording System :	AC bias, 57 kHz
Erasing System :	AC erasing
S/N (Signal to Noise Ratio) :	50 dB (Dolby NR OFF) 60 dB (Dolby NR ON)
Cross Talk :	Between tracks : 50 dB Between channels : 25 dB
Erase Ratio :	65 dB
Frequency Response :	Normal : 40~12000 Hz CrO ₂ : 40~14000 Hz METAL : 40~16000 Hz
Input Sensitivity and Impedance :	Microphone : 0.4mV, 500 ohms Phono : 3mV, 50 kohms DIN IN : 6mV, 12 kohms
Output Level and Impedance :	DIN OUT : 775mV, 5 kohms Ext. speaker : 3.2 ohms
Fast Forward or Rewinding Time :	110 sec (Using C-60)
Distortion :	1.5%
Motor :	DC micromotor
Wow and Flutter :	0.08% (WRMS)

Specifications and Schematic diagram are subject to change for performance improvement without notice.

DISASSEMBLY

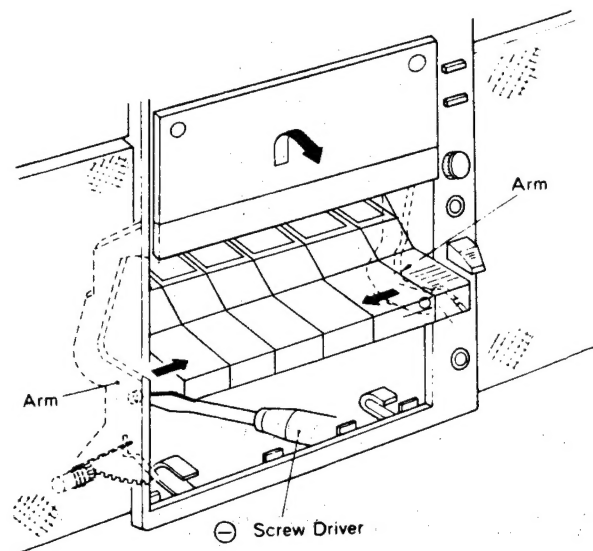
1. Head Cover

Lift up the head cover in the direction of arrow.

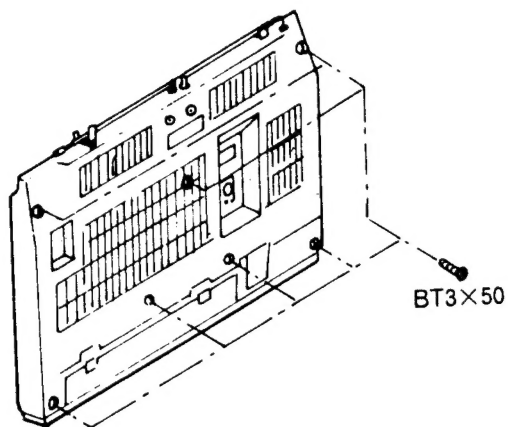


2. Cassette Lid

Press the eject button to release the engagement of the mechanism and cassette lid. Then push the both arms of cassette lid in the direction of arrow.



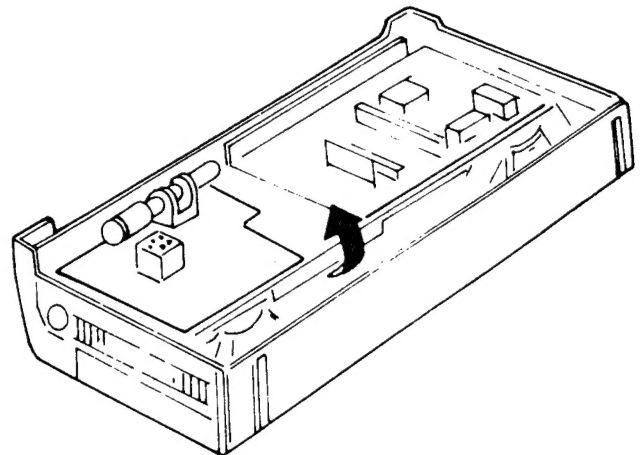
3. Rear Case



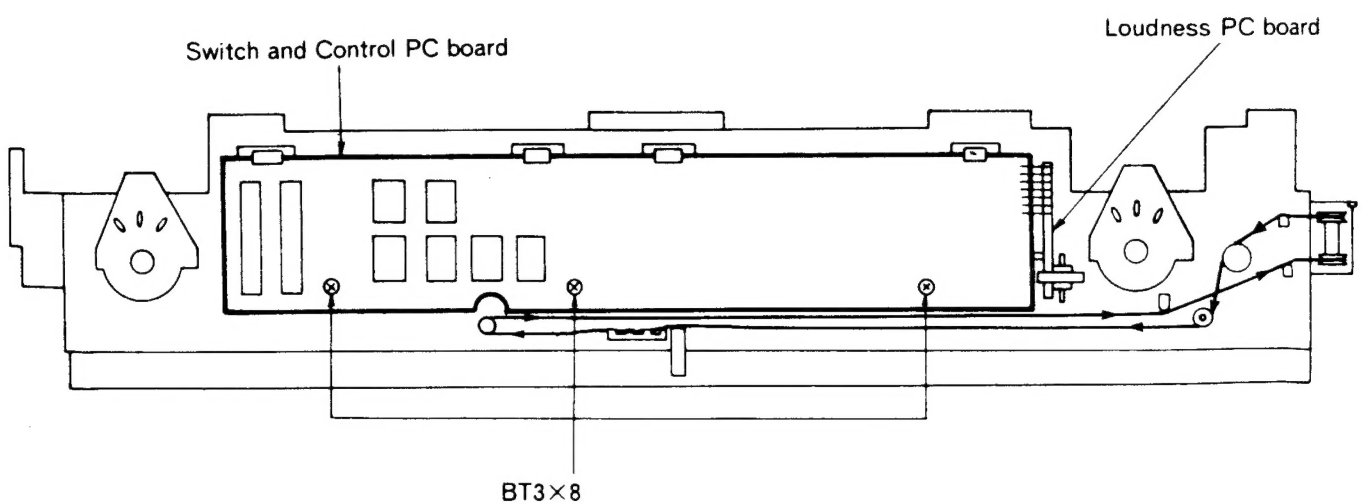
4. Main Chassis

Remove nine knobs (Function, Record level, Bass, Treble, Volume, Band, Tuning).

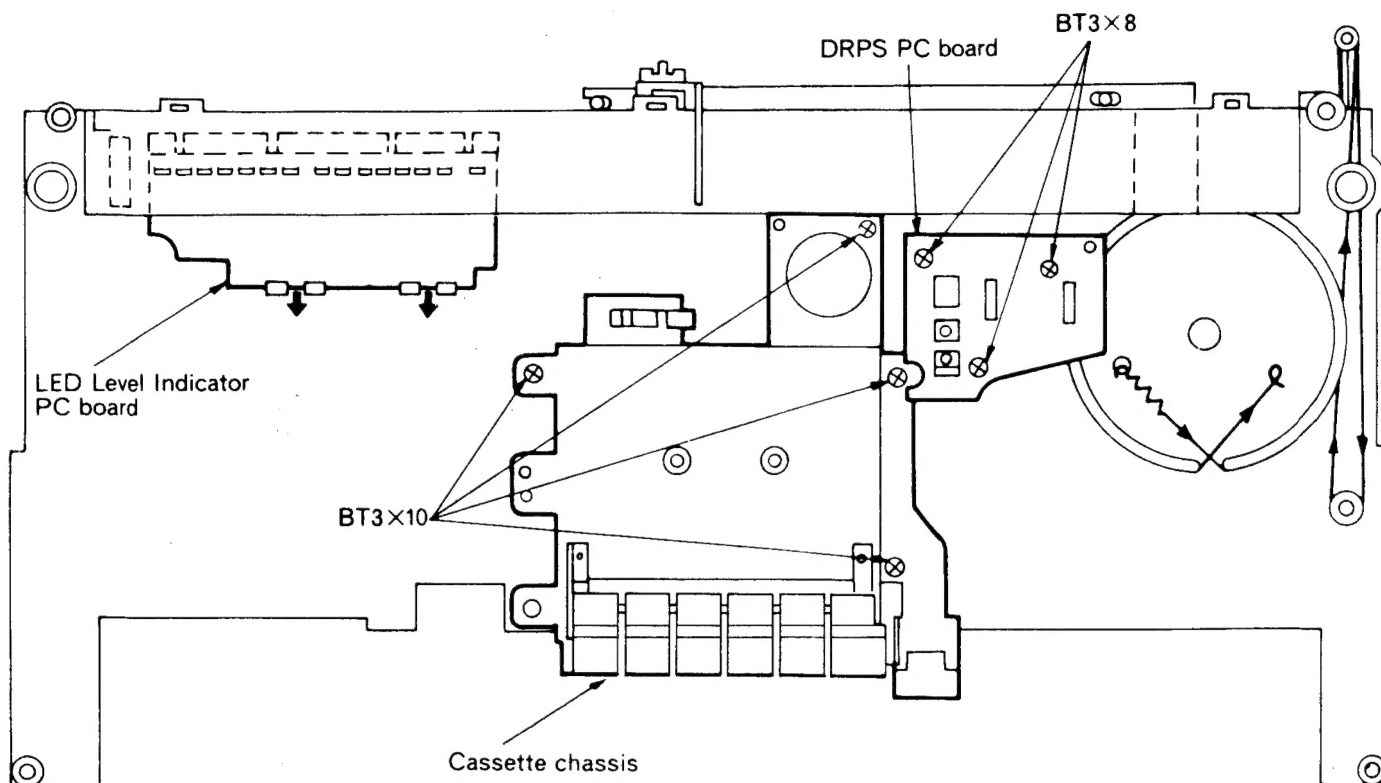
Press the eject button to release the engagement of the mechanism and cassette lid. Then lift up the battery side of the main chassis.



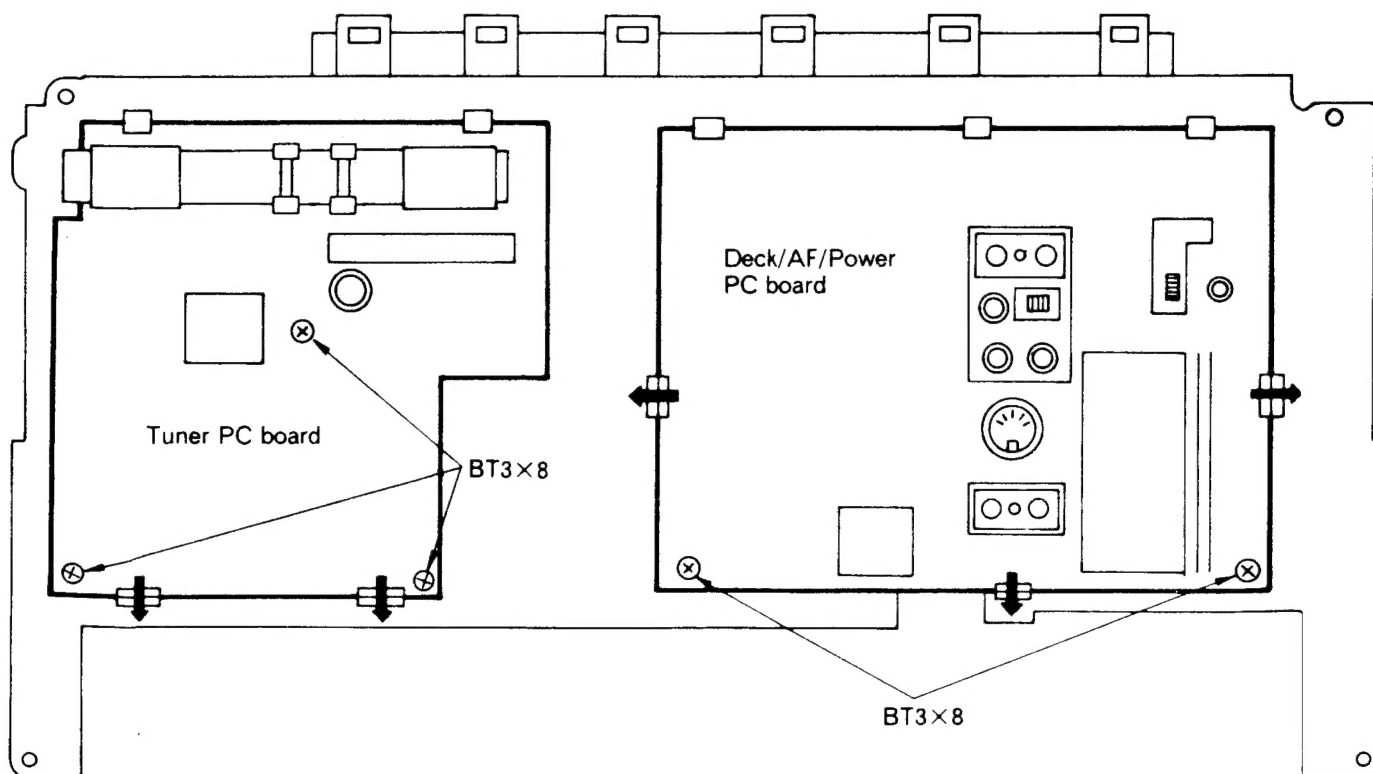
5. Switch and Control PC Board, Loudness PC Board



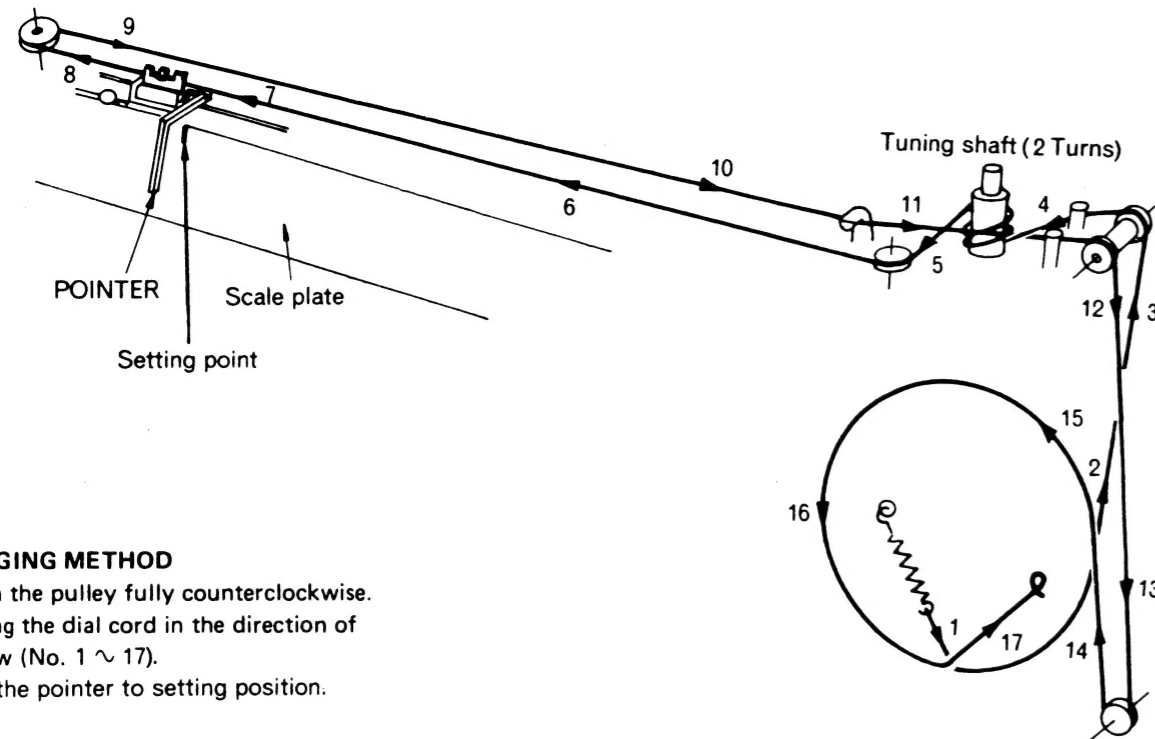
6. Cassette Chassis, LED Level Indicator PC Board, DRPS PC Board



7. Tuner PC Board, Deck/AF/Power PC Board



DIAL CORD STRINGING



STRINGING METHOD

1. Turn the pulley fully counterclockwise.
2. String the dial cord in the direction of arrow (No. 1 ~ 17).
3. Set the pointer to setting position.

LUBRICATION

Lubricate one or two drops of oil to rotating point or lubricate grease to sliding point. Lubricate the respective parts listed below once every 1000 hours or once a year under normal conditions of use. Avoid oiling them excessively, or rotation may become irregular because of oil splashes.

Lubrication point		Oil or Grease
Rotary section	Metal and metal	Pan motor oil (10W-40)
	Mold and metal	Sonic slider oil (#1600)
Sliding section	Metal and metal	Hitasol (MO-138)
	Mold and mold	White grease (FL-LUBE-A)
	Mold and metal	White grease (FL-LUBE-A)
Spring resonance prevention		Froil (GB-TS-1)

INSPECTION

Mode	Item	Pressure or Torque
Playback	Pressure of pressure roller	350gr ~ 500gr
	Take-up torque	35gr-cm ~ 65gr-cm
	Supply reel back tension	3.0gr-cm ~ 5gr-cm
Rewind	Rewind torque	85gr-cm ~ 120gr-cm
Fast Forward	Fast Forward torque	85gr-cm ~ 120gr-cm

ADJUSTMENT

TUNER

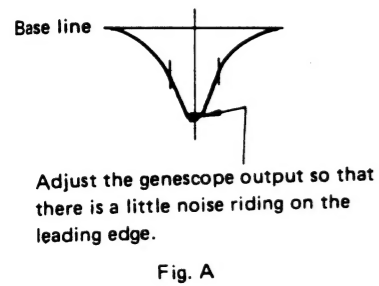
* West Germany

Item	Adjustments	Measuring instrument & connection			Signal generator or genescope frequency	Dial pointer position	Adjust	Reading	
		Measuring instrument	Input terminal	Output terminal					
Turn the T202 fully counterclockwise									
1	(1)	FM - IF	* Genescope (10.7MHz)	TP101	TP201	10.7MHz	Highest	T101 T201	See Note 1
	(2)	S - Curve						T202	See Note 2
2	(1)	FM - OSC (Covering)	* FM Signal generator (400Hz, 30% mod.) * VTVM	P1 (See Note 3)	TP201	87 MHz * 87.5 MHz	Lowest	L103	Output Max.
	(2)					109MHz	Highest	CT102	
	(3)		Repeat (1) and (2).						
3	(1)	FM - ANT (Tracking)	* FM Signal generator (400Hz, 30% mod.) * VTVM	P1 (See Note 3)	TP201	90MHz	90MHz	L101	Output Max.
	(2)					106MHz	106MHz	CT101	
	(3)		Repeat (1) and (2).						
4	(1)	AM - IF	* Genescope (468KHz)	Ferrite antenna	TP202	468KHz	Highest	T151 T204	See Note 4
5	(1)	LW-OSC (Covering)	* AM Signal generator (400Hz, 30% mod.) * VTVM	Ferrite antenna (See Note 5)	TP202	145KHz	Lowest	L156	Output Max.
	(2)					360KHz	Highest	CT156	
	(3)		Repeat (1) and (2).						
6	(1)	LW-ANT (Tracking)	* AM Signal generator (400Hz, 30% mod.) * VTVM	Ferrite antenna (See Note 5)	TP202	160KHz	160KHz	L153	Output Max.
	(2)					330KHz	330KHz	CT153	
	(3)		Repeat (1) and (2).						
7	(1)	MW-OSC (Covering)	* AM Signal generator (400Hz, 30% mod.) * VTVM	Ferrite antenna (See Note 5)	TP202	515KHz	Lowest	L155	Output Max.
	(2)					1650KHz	Highest	CT155	
	(3)		Repeat (1) and (2).						
8	(1)	MW-ANT (Tracking)	* AM Signal generator (400Hz, 30% mod.) * VTVM	Ferrite antenna (See Note 5)	TP202	600KHz	600KHz	L152	Output Max.
	(2)					1400KHz	1400KHz	CT152	
	(3)		Repeat (1) and (2).						
9	(1)	SW-OSC (Covering)	* AM Signal generator (400Hz, 30% mod.) * VTVM	P1 (See Note 6)	TP202	5.8MHz	Lowest	L154	Output Max.
	(2)					18.5MHz	Highest	CT154	
	(3)		Repeat (1) and (2).						

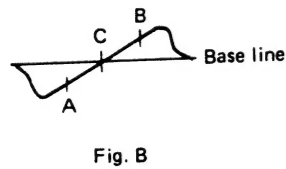
Item		Adjustments	Measuring instrument & connection			Signal generator or genescope frequency	Dial pointer position	Adjust	Reading
			Measuring instrument	Input terminal	Output terminal				
10	(1)	SW-ANT (Tracking)	* AM Signal generator (400Hz, 30% mod.)	P1 (See Note 6)	TP202	6.5MHz	6.5MHz	L151	Output Max.
	* VTVM		16.0MHz			16.0MHz	CT151		
	(3)		Repeat (1) and (2).						
11	(1)	FM - Multiplex	* Frequency counter	See Note 7	P8	—	—	RT302	19KHz±0.2KHz
12	(1)	FM - Separation	* FM Stereo signal generator L+R (1KHz) : 180mV, 30% mod. Pilot (19KHz) : 20mV, 10% mod. * VTVM	P1 (See Note 3)	TP301, 302	98MHz	98MHz	RT301	See Note 8
13	(1)	FM- Tuning level	* VTVM	P1	TP203	Sweep signal	—	T203	Output Max.

Note :

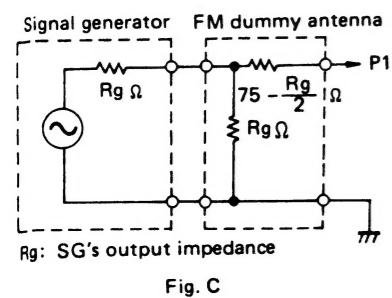
- 1) Feed in a weak signal from the genescope. Adjust the T101, T201 for maximum gain and the waveform indicated in Figure A. If the center of the waveform cannot be lined up on the marker, adjust the rihgt/left balance.



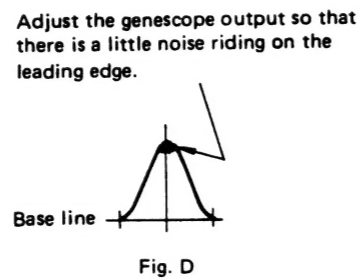
- 2) Use the T202 core to form the S-curve shown in Figure B. Adjust the symmetry of A and B about point C for linearity.



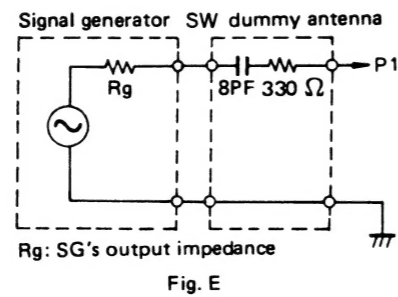
- 3) Transmit to the dummy antenna in Figure C and connect to P1.



- 4) Feed in a weak signal from the genescope. Adjust the T151, T204 for maximum gain and the waveform indicated in Figure D. If the center of the waveform cannot be lined up on the marker, adjust the right/left balance.



- 5) Connect AM signal generator to loop antenna, bring near to ferrite antenna.
- 6) Transmit to the dummy antenna in Figure E and connect to P1.



- 7) Connect a 10μF 25V electrolytic capacitor between the No.2 pin of IC301 and ground.
- 8) a. After feeding in of R channel and pilot signals, adjust RT301 for a minimum L channel output.
- b. Optimize RT301 so that the leak level of the L channel signal is equal to that of the R channel signal.

TAPE RECORDER

* According to DIN 45-500

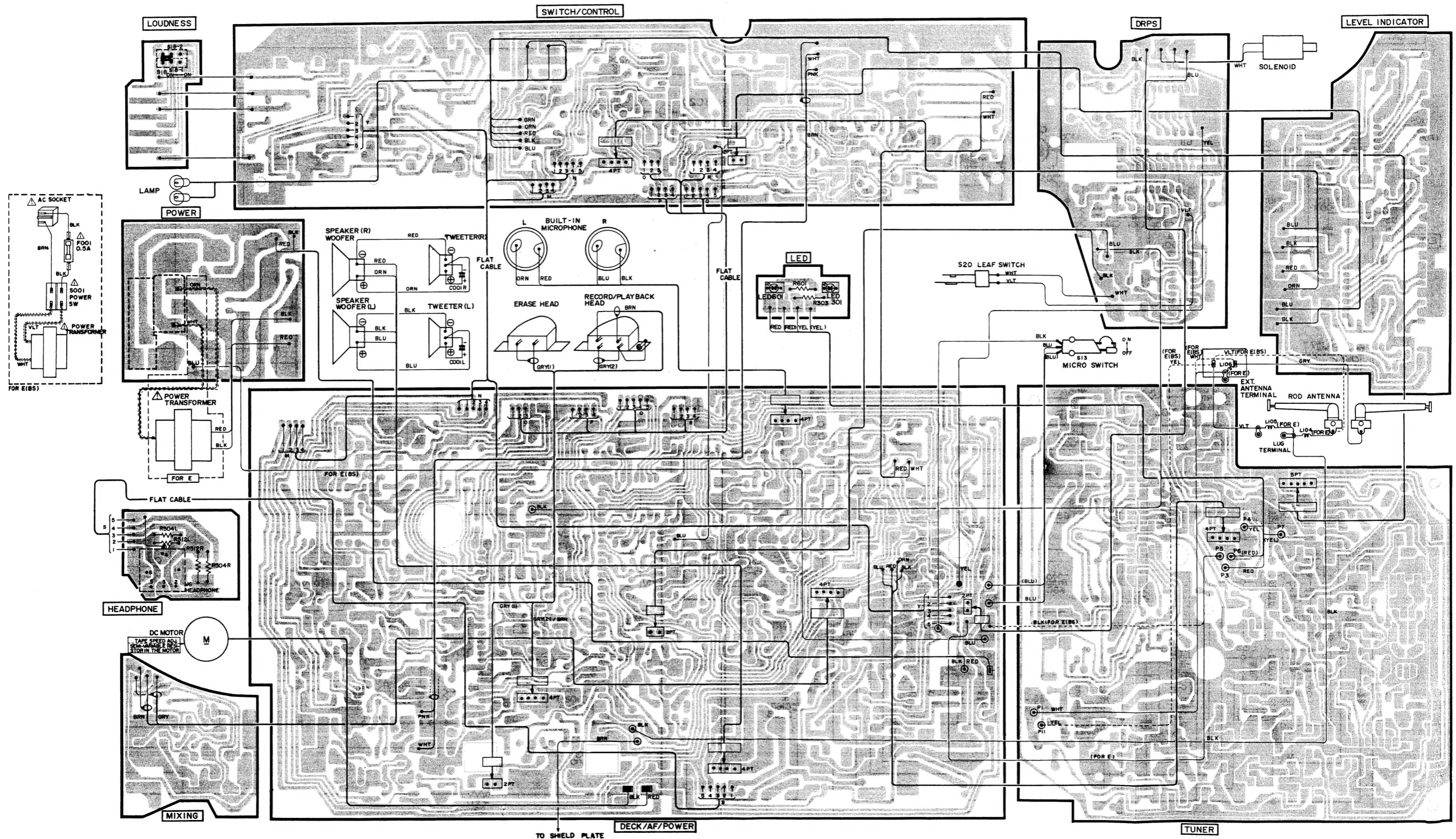
Item	Adjustments	Measuring instrument & connection			Check tape	Mode	Adjust	Reading
		Measuring instrument	Input terminal	Output terminal				
1	Tape speed	* Frequency counter	—	DIN OUT	MTT-111 3000Hz *(3150 Hz)	PLAY	Semi-variable resistor in the motor	3000 Hz +90 -10 Hz (See Note 1)
2	Head azimuth	* VTVM	—	DIN OUT	MTT-316 or MTT-216, 12.5KHz	PLAY	Azimuth adjusting screw	Output Max. (See Note 2)
3	Playback gain	* VTVM	—	TP401L, R	MTT-150, 400Hz 200 nwb/m	PLAY	RT402L, R	0.775V (0 dBm)
4	Level indicator						RT404L, R	See Note 3
5	Bias leakage	Set the tape selector (bias) switch to the METAL position.						
		* VTVM	—	TP403L, R	—	REC	L401L, R	Output Min.
6	Bias current	Set the tape selector (bias/EQ) switch to the normal position. Set the RT403L, R to middle position.						
		* Audio oscillator (1.25KHz/12.5 KHz, -20 dB) * Frequency counter * VTVM	DIN IN	DIN OUT	Hitachi UD tape	REC/ PLAY	RT401L, R	See Note 4
7	Record/Playback output	Set the tape selector (bias/EQ) switch to the normal position.						
		* Audio oscillator (400Hz, 0dB) * Frequency counter * VTVM	DIN IN	DIN OUT	Hitachi UD tape	REC/ PLAY	RT403L, R	0dB±1dB
8	Dolby NR check	* Audio oscillator (5KHz) * Frequency counter * VTVM	DIN IN	TP401L, R	—	REC	—	See Note 5
9	DRPS operation level	—	—	—	TMT-6261, 500Hz -40dB, -35dB	PLAY	RT701	See Note 6

Note :

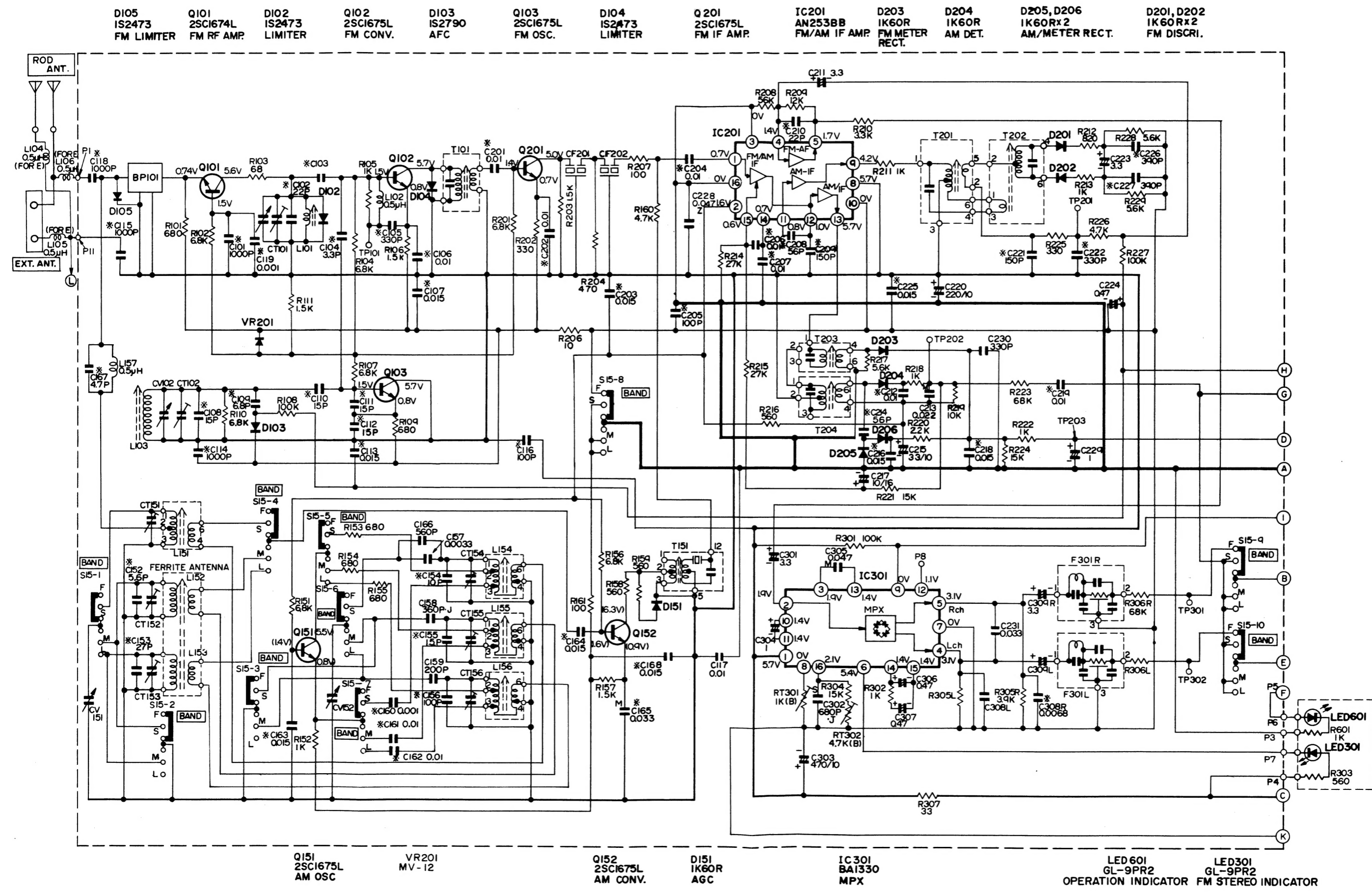
- 1) Adjust within 30 sec. after heat-running for more than 20 minutes.
- 2) When the maximum values of both channels are different, tune to the maximum value of the L channel. In this case, the difference between the maximum values of both channels should be within 2dB.
- 3) With the condition shown in item 3, adjust RT404L, R so that the level indicator lamp (0dB) lights up.
- 4) a. Set the RT401L, R to middle position.
- b. Turn the L402L, R fully clockwise.
- c. Record a 1.25KHz and 12.5KHz signals with a level of 0dB

- 20dB (at test point TP401L, R) on Hitachi UD tape. Then, playback this tape and adjust RT401L, R so that the output difference is within ± 2dB.
- 5) Supply a 5KHz signal to the DIN IN jacks to obtain the level of -30,4dBm ± 0.1dB at test points TP401L, R. Confirm that the level is boosted by 8dBm ± 0.2dB when the Dolby NR switch is set to ON.
- 6) Load the test tape TMT - 6261 (500Hz -40dB, -35dB) and set the unit to the DRPS mode from the playback mode. Adjust RT701 so that the number displayed by the program indicator decreases by one when the level of the test tape changes from -35dB to -40dB.

WIRING DIAGRAM

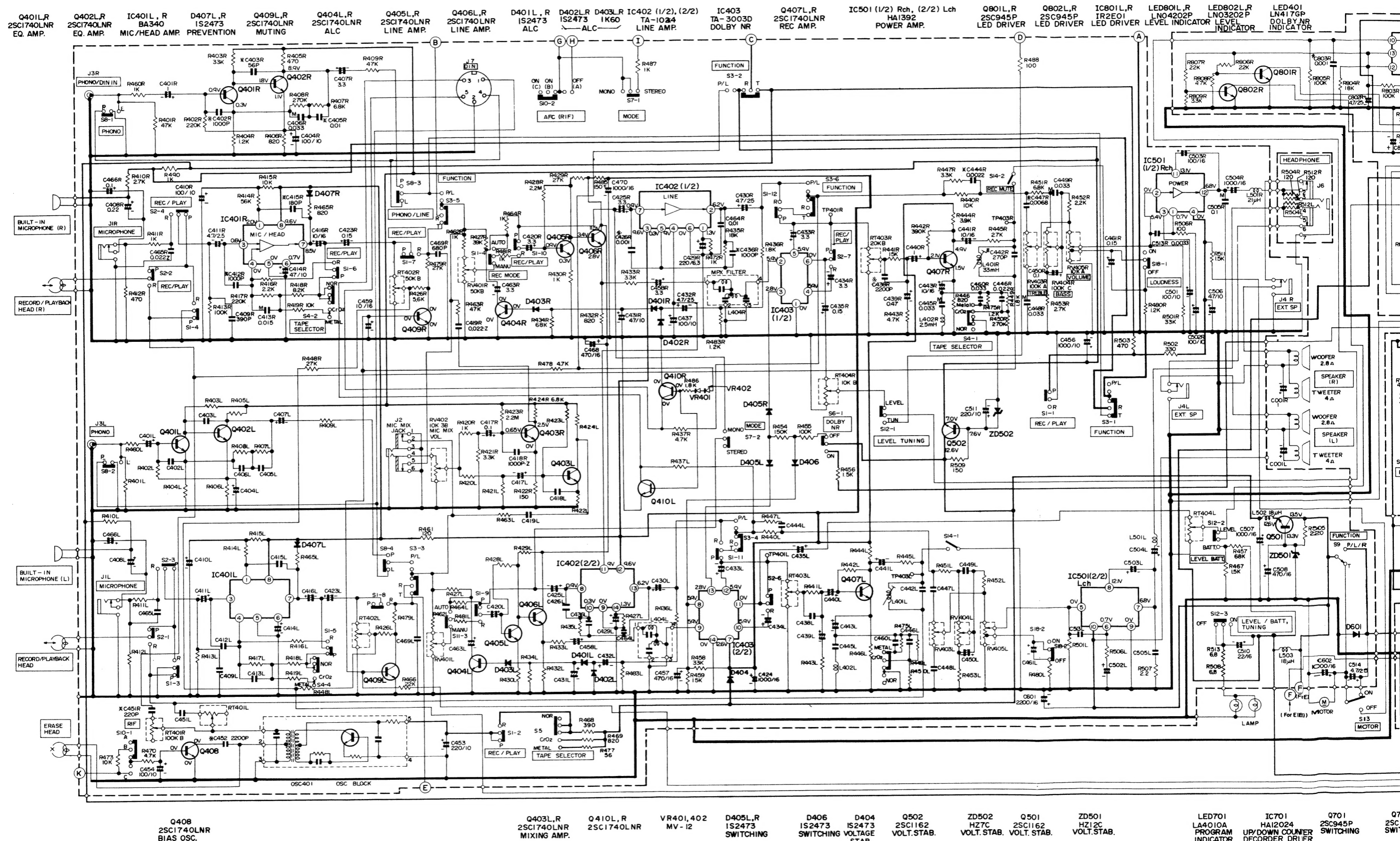


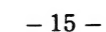
SCHEMATIC DIAGRAM



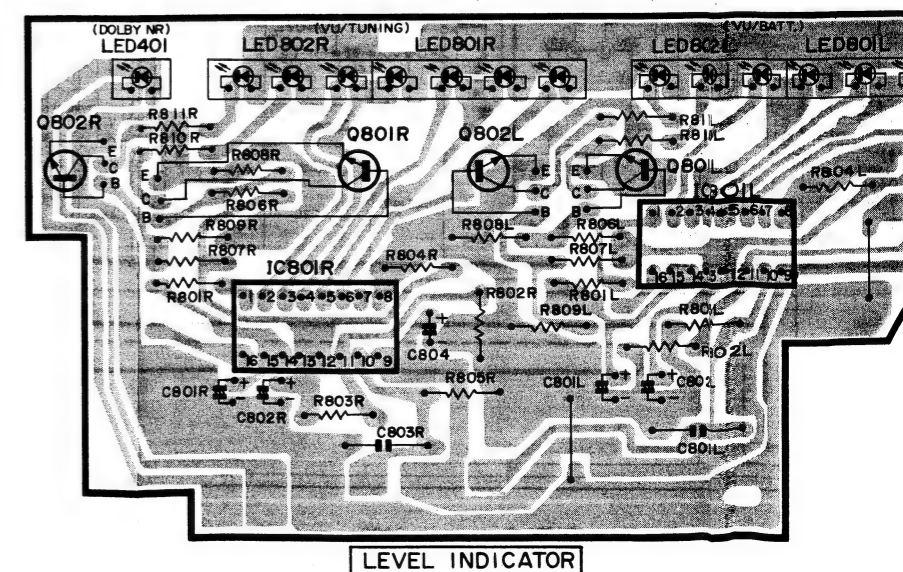
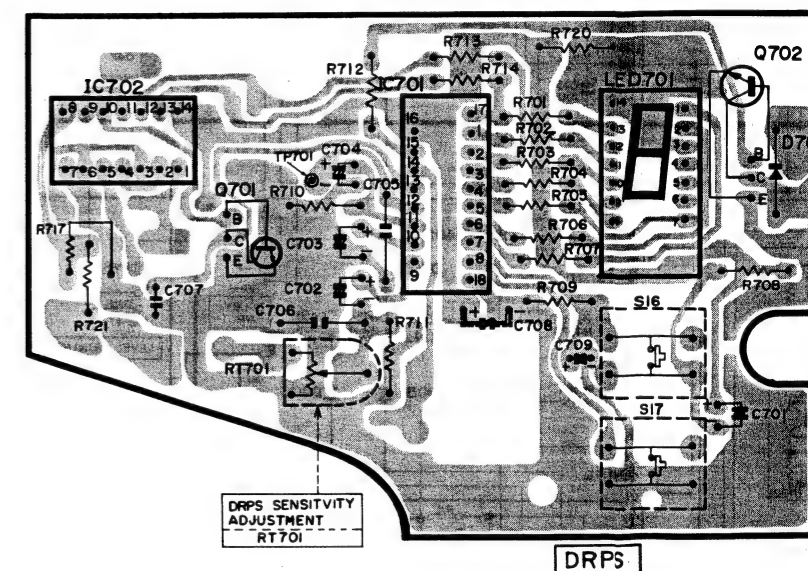
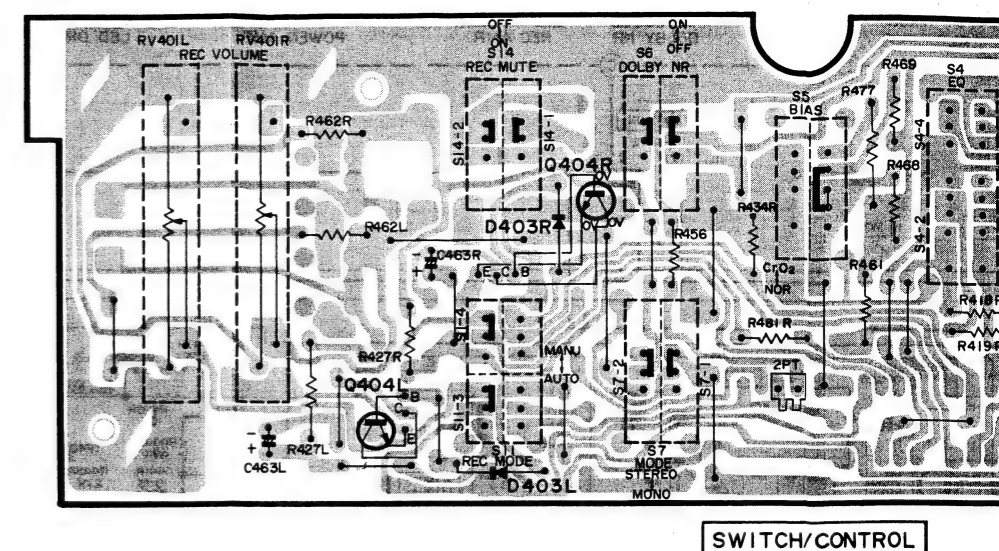
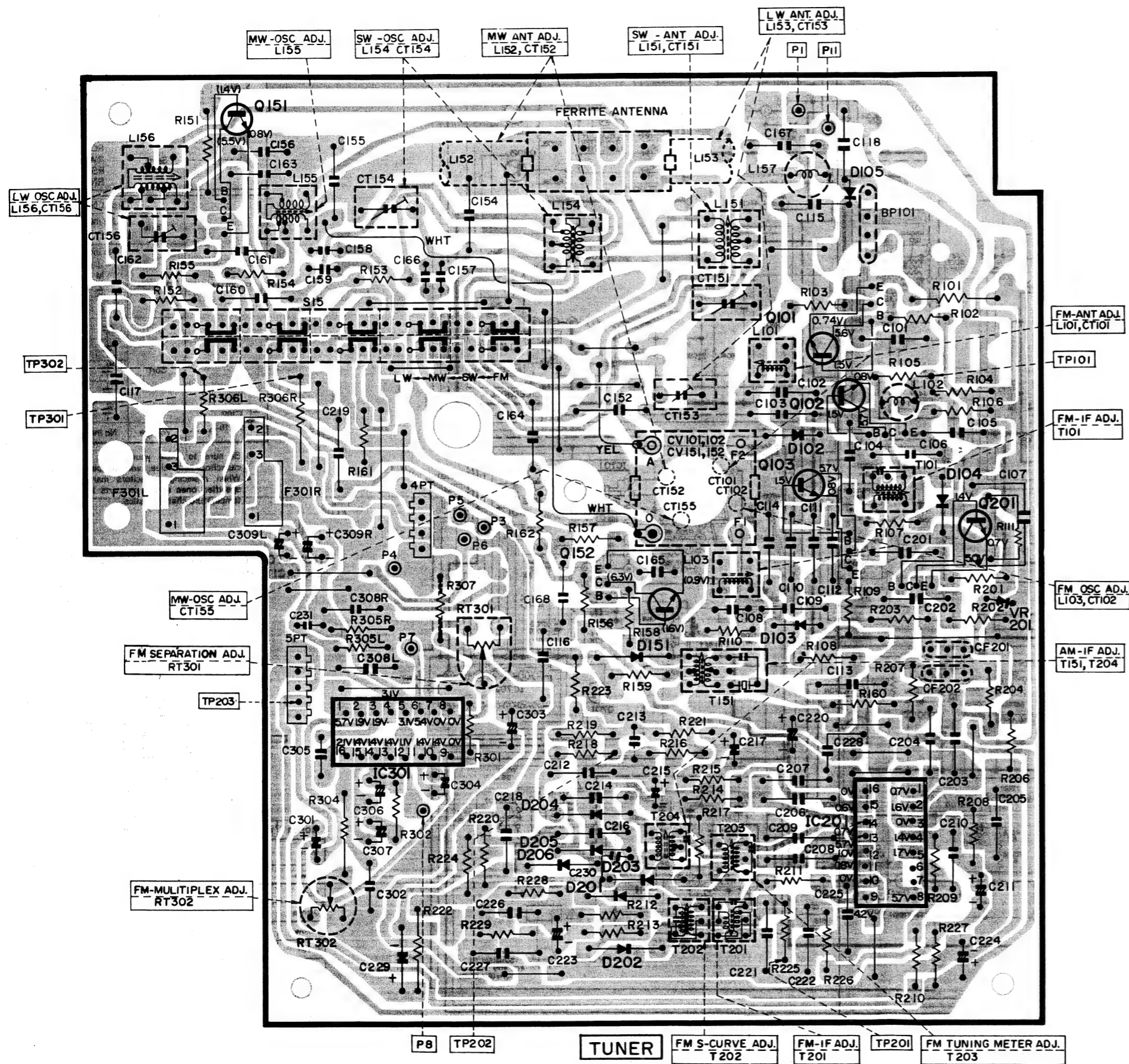
TRK-8290E, E(BS)	TRK-8290E, E(BS)
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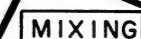
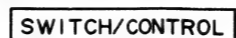
SCHEMATIC DIAGRAM



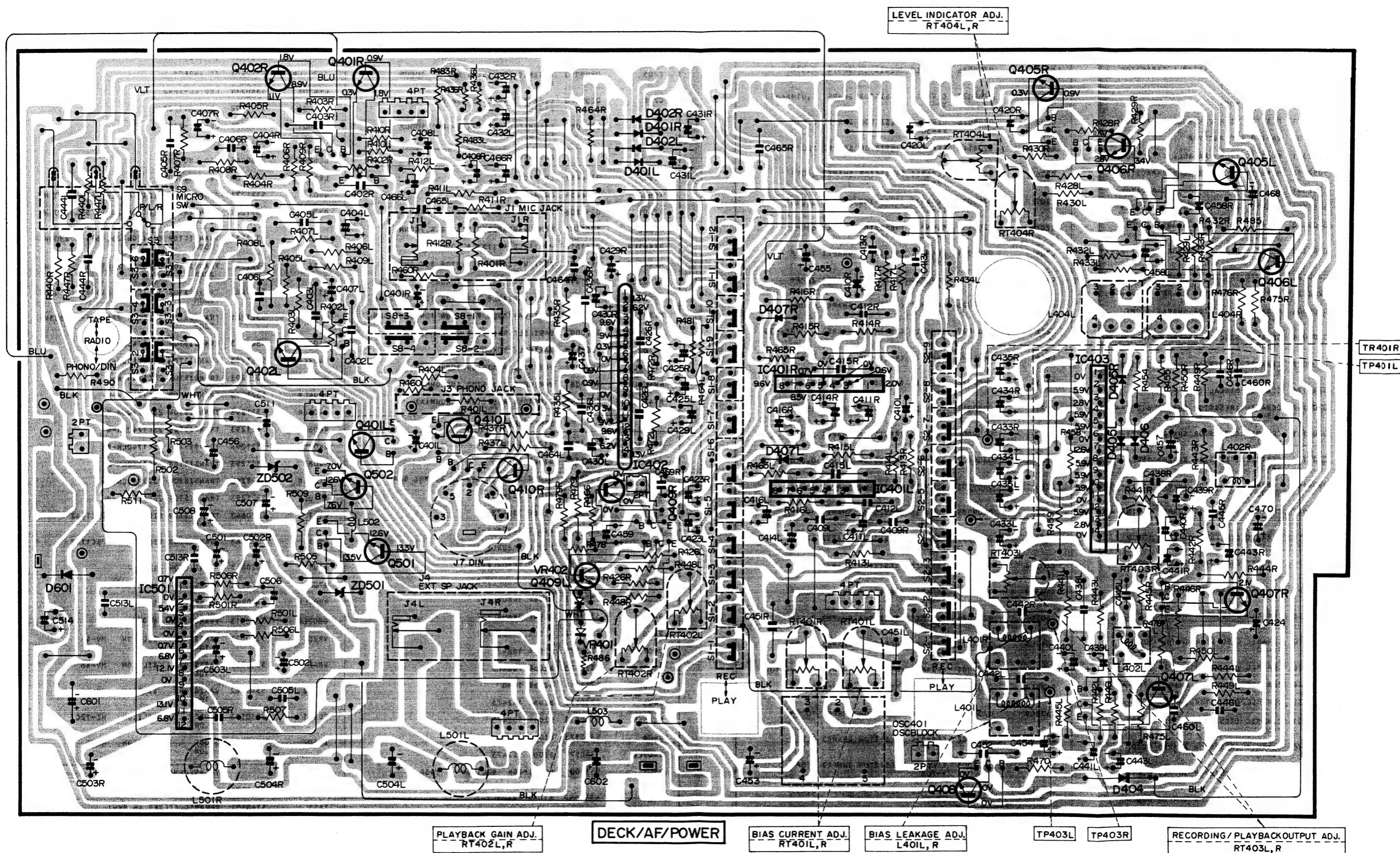


CIRCUIT BOARD DIAGRAM





CIRCUIT BOARD DIAGRAM



REPLACEMENT PARTS LIST

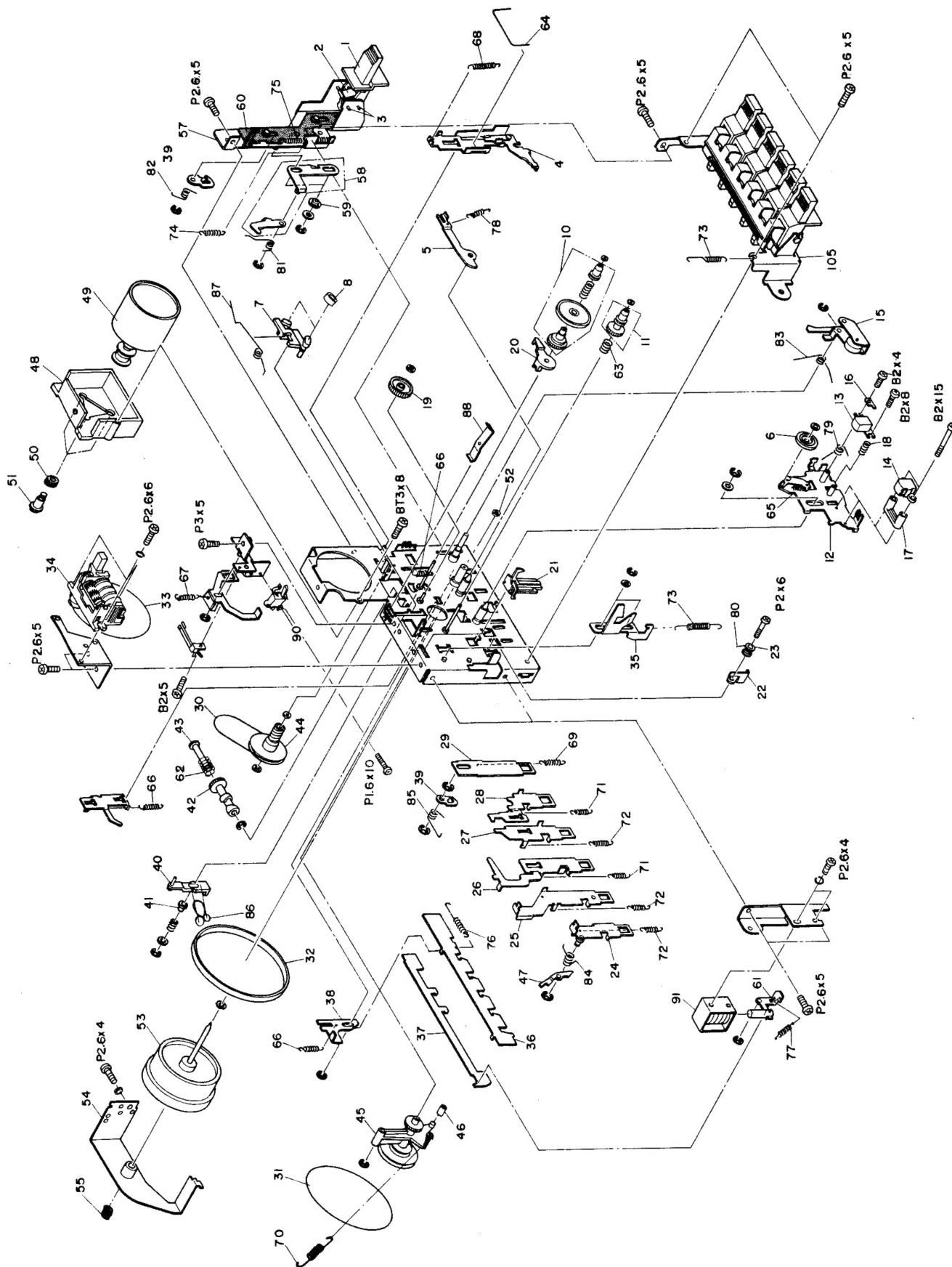
SYMBOL-NO	P-NO	DESCRIPTION	SYMBOL-NO	P-NO	DESCRIPTION
CAPACITORS					
CT101	5052391	PLASTIC FILM VARIABLE CAPACITOR	C167	0208125	CERAMIC (RESISTOR SHAPE) 4.7PF+-5%
CT102	5052391	PLASTIC FILM VARIABLE CAPACITOR	C168	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%
CT151	5058191	TRIMMER 10PF	C201	0209026	CERAMIC (RESISTOR SHAPE) 0.01M F+-30
CT152	5052391	PLASTIC FILM VARIABLE CAPACITOR	C202	0209026	CERAMIC (RESISTOR SHAPE) 0.01M F+-30
CT153	5058191	TRIMMER 10PF	C203	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%
CT154	5058191	TRIMMER 10PF	C204	0209026	CERAMIC (RESISTOR SHAPE) 0.01M F+-30
CT155	5052391	PLASTIC FILM VARIABLE CAPACITOR	C205	0208141	CERAMIC (RESISTOR SHAPE) 100PF +-5%
CT156	5058102	VARIABLE CAPACITOR	C206	0209026	CERAMIC (RESISTOR SHAPE) 0.01M F+-30
CV101	5052391	PLASTIC FILM VARIABLE CAPACITOR	C207	0209026	CERAMIC (RESISTOR SHAPE) 0.01M F+-30
CV102	5052391	PLASTIC FILM VARIABLE CAPACITOR	C208	0208138	CERAMIC (RESISTOR SHAPE) 680PF +-16%
CV151	5052391	PLASTIC FILM VARIABLE CAPACITOR	C209	0209011	CERAMIC (RESISTOR SHAPE) 150PF +-10%
CV152	5052391	PLASTIC FILM VARIABLE CAPACITOR	C210	0208133	CERAMIC (RESISTOR SHAPE) 22PF+-5%
C101	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10	C212	0209026	CERAMIC (RESISTOR SHAPE) 0.01M F+-30
C102	0208133	CERAMIC DISC (RESISTOR SHAPE) 22PF+-5%	C216	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%
C103	0208125	CERAMIC (RESISTOR SHAPE) 4.7PF+-5%	C218	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%
C104	0208124	CERAMIC (RESISTOR SHAPE) 3.3PF+-5%	C219	0209026	CERAMIC (RESISTOR SHAPE) 0.01M F+-30
C105	0209004	CERAMIC (RESISTOR SHAPE) 330PF +-10%	C221	0209011	CERAMIC (RESISTOR SHAPE) 150PF +-10%
C106	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01M F+-30	C222	0209004	CERAMIC (RESISTOR SHAPE) 330PF +-10%
C107	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%	C225	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%
C108	0248174	CERAMIC DISCAL 15PF+-5%	C226	0209005	CERAMIC (RESISTOR SHAPE) 390PF +-10%
C109	0208157	CERAMIC (RESISTOR SHAPE) 6.8PF+-10% (NP-0)	C227	0209005	CERAMIC (RESISTOR SHAPE) 390PF +-10%
C110	0208161	CERAMIC (RESISTOR SHAPE) 15PF+-10% (NP-0)	C308LR	0209025	CERAMIC (RESISTOR SHAPE) 6800P F+-30
C111	0208161	CERAMIC (RESISTOR SHAPE) 15PF+-10% (NP-0)	C402LR	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10
C112	0208161	CERAMIC (RESISTOR SHAPE) 15PF+-10% (NP-0)	C403LR	0208138	CERAMIC (RESISTOR SHAPE) 680PF +-16%
C113	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%	C405LR	0209026	CERAMIC (RESISTOR SHAPE) 0.01M F+-30
C114	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10	C412LR	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10
C115	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10	C415LR	0209001	CERAMIC (RESISTOR SHAPE) 180PF+-10%
C116	0208141	CERAMIC (RESISTOR SHAPE) 100PF +-5%	C426LR	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10
C117	0209026	CERAMIC (RESISTOR SHAPE) 0.01M F+-30	C436LR	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10
C118	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10	C438LR	0209022	CERAMIC (RESISTOR SHAPE) 0.002 2MF+-
C152	0208126	CERAMIC (RESISTOR SHAPE) 5.6PF+-5%	C442LR	0209003	CERAMIC (RESISTOR SHAPE) 270PF +-10%
C153	0208134	CERAMIC (RESISTOR SHAPE) 27PF+-5%	C444LR	0209022	CERAMIC (RESISTOR SHAPE) 0.002 2MF+-
C155	0208131	CERAMIC (RESISTOR SHAPE) 15PF+-5%	C447LR	0209025	CERAMIC (RESISTOR SHAPE) 6800P F+-30
C156	0208141	CERAMIC (RESISTOR SHAPE) 100PF +-5%	C451LR	0209002	CERAMIC (RESISTOR SHAPE) 220PF +-10%
C160	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10			
C161	0209026	CERAMIC (RESISTOR SHAPE) 0.01M F+-30			
C162	0209026	CERAMIC (RESISTOR SHAPE) 0.01M F+-30			
C163	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%			
C164	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%			

SYMBOL-NO	P-NO	DESCRIPTION	SYMBOL-NO	P-NO	DESCRIPTION
CAPACITORS					
C452	0209022	CERAMIC (RESISTOR SHAPE) 0.002 2MF+-	IC403	5356832	MODULE TA3003
C704	0256362	TANTALUM ELECTROLYTIC 0.22MF+-10% 3 5V	IC501	5352141	IC HA1392
C705	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10	IC701	5352381	IC HA12024
C706	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10	IC702	5359501	IC MPD4011C
C803R	0209010	CERAMIC (RESISTOR SHAPE) 1000P F+-10	IC801LR	5352401	IC 1R2E01
RESISTORS			LED301	5380271	LED GL-9PR2
RC601	0186451	CR PACK	LED401	5380592	LED LN417GP
RC602	0186451	CR PACK	LED601	5380271	LED GL-9PR2
RT301	0151806	SEMI VARIABLE RESISTOR 1KOHM B	LED701	5380521	LED LA4010A
RT302	5007185	SEMI VARIABLE RESISTOR 4.7KOHM	LED801LR	5380461	LED LN04202P
RT401LR	0151818	VARIABLE RESISTOR 100KOHM	LED802LR	5380463	LED LN03202P
RT402LR	0151821	SEMI VARIABLE RESISTOR 50K OHM	Q101	5321271	TRANSISTOR SILICON 2SC1674L 600MHZ
RT403LR	0151817	VARIABLE RESISTOR 20KOHM B	Q102	5321281	TRANSISTOR SILICON 2SC1675-L 230MHZ 200M
RT404LR	0151808	SEMI VARIABLE RESISTOR 10K OHM RS88	Q103	5321281	TRANSISTOR SILICON 2SC1675-L 230MHZ 200M
RT701	0151808	SEMI VARIABLE RESISTOR 10K OHM RS88	Q151	5321281	TRANSISTOR SILICON 2SC1675-L 230MHZ 200M
RV401LR	5020092	VARIABLE RESISTOR 50KOHM(B)	Q152	5321281	TRANSISTOR SILICON 2SC1675-L 230MHZ 200M
RV402	5000408	VARIABLE 10KOHM(B)	Q201	5321281	TRANSISTOR SILICON 2SC1675-L 230MHZ 200M
RV403LR	5020082	VARIABLE RESISTOR 100KOHM(B)	Q401LR	5321293	TRANSISTOR 2SC1740LN-R
RV404LR	5020081	VARIABLE RESISTOR 100KOHM(C)	Q402LR	5321293	TRANSISTOR 2SC1740LN-R
RV405LR	5020093	VARIABLE RESISTOR 10KOHM(A)	Q403LR	5321293	TRANSISTOR 2SC1740LN-R
SEMI-CONDUCTORS			Q404LR	5321293	TRANSISTOR 2SC1740LN-R
DB601	5331521	DIODE S4VB10	Q405LR	5321293	TRANSISTOR 2SC1740LN-R
D102	5330573	DIODE 1S2473	Q406LR	5321293	TRANSISTOR 2SC1740LN-R
D103	5330661	DIODE SILICON LS2790 200MHZ 80MW	Q407LR	5321293	TRANSISTOR 2SC1740LN-R
D104	5330573	DIODE 1S2473	Q408	5321293	TRANSISTOR 2SC1740LN-R
D105	5330573	DIODE 1S2473	Q409LR	5321293	TRANSISTOR 2SC1740LN-R
D151	5331052	DIODE 1K60RLF-2	Q410LR	5321293	TRANSISTOR 2SC1740LN-R
D201	5331052	DIODE 1K60RLF-2	Q501	5320643	TRANSISTOR SILICON 2SC1162 150M
D202	5331052	DIODE 1K60RLF-2	Q502	5320643	TRANSISTOR SILICON 2SC1162 150M
D203	5331052	DIODE 1K60RLF-2	Q701	5320813	TRANSISTOR 2SC945P
D204	5331052	DIODE 1K60RLF-2	Q702	5322213	TRANSISTOR 2SC1741R
D205	5331052	DIODE 1K60RLF-2	Q801LR	5320813	TRANSISTOR 2SC945P
D206	5331052	DIODE 1K60RLF-2	Q802LR	5320813	TRANSISTOR 2SC945P
D401LR	5330573	DIODE 1S2473	VR201	5340022	VARISTOR 10K SILICON HV-46
D402LR	5330573	DIODE 1S2473	VR401	5340022	VARISTOR 10K SILICON HV-46
D403LR	5331051	DIODE 1K60	VR402	5340022	VARISTOR 10K SILICON HV-46
D404	5330573	DIODE 1S2473	ZD501	5330533	DIODE 1.0M SILICON HZ-12C
D405LR	5330573	DIODE 1S2473	ZD502	5330313	DIODE 1.0M SILICON HZ7C
D406	5330573	DIODE 1S2473	TRANSFORMERS		
D407LR	5330573	DIODE 1S2473	T101	5140071	FM IFT
D601	5330001	RECTIFIER SILICON 60H V03C	T151	5160101	CERAMIC FILTER 46.8KHZ
D701	5331052	DIODE 1K60RLF-2	T201	5148111	FM DISCRIMINATOR
IC201	5351064	IC AN253BB	T202	5148112	FM DISCRIMINATOR
IC301	5350684	IC HA1330	T203	5140072	FM IFT
IC401LR	5350961	IC BA340	T204	5130122	AM IFT
IC402	5357001	IC TA1024			

SYMBOL-NO	P-NO	DESCRIPTION	SYMBOL-NO	P-NO	DESCRIPTION
COILS					
L101	5126482	FM RF	S 15	5625011	SLIDE SWITCH (BAND SELECTOR)
L102	5150791	CHOKE COIL	S 16	5633352	PUSH SWITCH (PROGRAM)
L103	5126278	FM OSCILLATOR COIL	S 17	5633352	PUSH SWITCH (RESET)
L104-106	5123271	FM TRAP COILLO.5MH (E)	S 18	5633313	PUSH SWITCH (LOUDNESS)
L151	5123493	SWITCH ANTENNA	S 20	5603112	LEAF SWITCH
L152	5113501	FERRITE CORE ANTENNA	△ S001	5602021	SEESAW SWITCH (BS)
L153	5113501	FERRITE CORE ANTENNA	FOR ACCESSORIES		
L154	5123494	SW OSC	△	5747321	POWER CORD
L155	5120319	OSCILLATOR COIL	△	5746341	CORD ASSEMBLY (BS)
L156	5120465	LW OSC		5896391	FM ANTENNA (BS)
L157	5123271	FM TRAP COILLO.5MH	FOR CASSETTE DECK ASSEMBLY (A)		
L401LR	5260215	TRAP COIL 33MH	1	6257821	FUNCTION BUTTON ASSEMBLY (TIMER STANDBY)
L402LR	5120274	CHOKE COIL	2	6534831	BUTTON HOLDER SPRING
L404LR	5161661	DOLBY FILTER	3	7552711	PIN FOR TIMER STANDBY BUTTON
L501LR	5150761	CHOKE COIL	4	7340171	REVIEW/CUE PLATE ASSEMBLY
L502	5152123	CHOKE 18MICRO H	5	7340311	REVIEW/CUE LEVER
L503	5152123	CHOKE 18MICRO H	6	6382151	PLAY SLIDER
MISCELLANEOUS			7	6767641	BRAKE LEVER
△	5653242	POWER SOCKET	8	6586191	RUBBER FOR BRAKE
	5653321	IC SOCKET	9	7334541	BRAKE PLATE
	5659121	BACK COVER	10	6414521	TAKE UP REEL ASSEMBLY
ANT,J	5671661	FM ANTENNA TERMINAL	11	6414511	SUPPLY REEL ASSEMBLY
BP101	5161551	FILTER	12	7042801	HEAD PLATE ASSEMBLY
CF201	5160211	CERAMIC FILTER 10.7MHZ	13	5444991	RECORD PLAYBACK HEAD
CF202	5160211	CERAMIC FILTER 10.7MHZ	14	5445282	ERASE HEAD
△ F001	5720173	FUSE 500MA (BS)	15	6383771	PRESSURE ROLLER ASSEMBLY
F301LR	5161731	LCR FILTER	16	7317371	EARTH PLATE
F601	5721064	FUSE 2.5A	17	6767591	STUD FOR ERASE HEAD
F602	5721064	FUSE 2.5A	18	6520451	HEAD SPRING
J1LR	5679442	JACK PLATE (MIC)	19	6431471	RELAY IDLER GEAR
J2	5674133	MIX MICROPHONE JACK	20	6767621	LEVER
J3	5676241	JACK (PHONO)	21	6767631	RECORD PREVENTION ARM
J4LR	5679442	JACK PLATE (EXT.SP)	22	7340231	RECORD PREVENTION LEVER
J6	5674133	HEAD PHONE JACK	23	7598371	COLLAR FOR RECORD PREVENTION LEVER
J7	5653211	DIN JACK	24	7340191	EJECT LEVER ASSEMBLY
OSC401	5260821	OSCILLATOR BLOCK	25	7334601	RECORD LEVER
S 1	5623611	SLIDE SWITCH (REC./P.B)	26	7334561	PLAY LEVER
S 2	5623431	SLIDE SWITCH (REC./P.B)	27	7334531	REWIND LEVER
S 3	5624221	SLIDE SWITCH (FUNCTION)	28	7334551	FF LEVER
S 4	5604281	LEVER SWITCH (TAPE SELECTOR EQ)	29	7340221	PAUSE LEVER ASSEMBLY
S 5	5604092	LEVER SWITCH (TAPE SELECTOR BIAS)	30	6354231	TAKE UP BELT
S 6	5604082	LEVER SWITCH (DOLBY NR)	31	6355181	BELT
S 7	5604082	LEVER SWITCH (MODE)	32	6357471	FLYWHEEL BELT
S 8	5623871	SLIDE SWITCH (PHONO/LINE)	33	6355411	BELT FOR COUNTER
S 10	5604092	LEVER SWITCH (RIF/AFC)	34	5559542	COUNTER
S 11	5604104	LEVER SWITCH (AUTO/MANUAL)	35	7334121	CASSETTE LOCK LEVER
S 12	5604105	LEVER SWITCH (LEVEL/TUNE/BATTERY)	36	7340201	LOCK PLATE (A)
S 13	5632412	MICRO SWITCH (MOTOR)	37	7334091	LOCK PLATE(B)
S 14	5604083	LEAF SWITCH (REC MUTE)	38	7340241	SHUT OFF LEVER
			39	7340251	LATCH PLATE

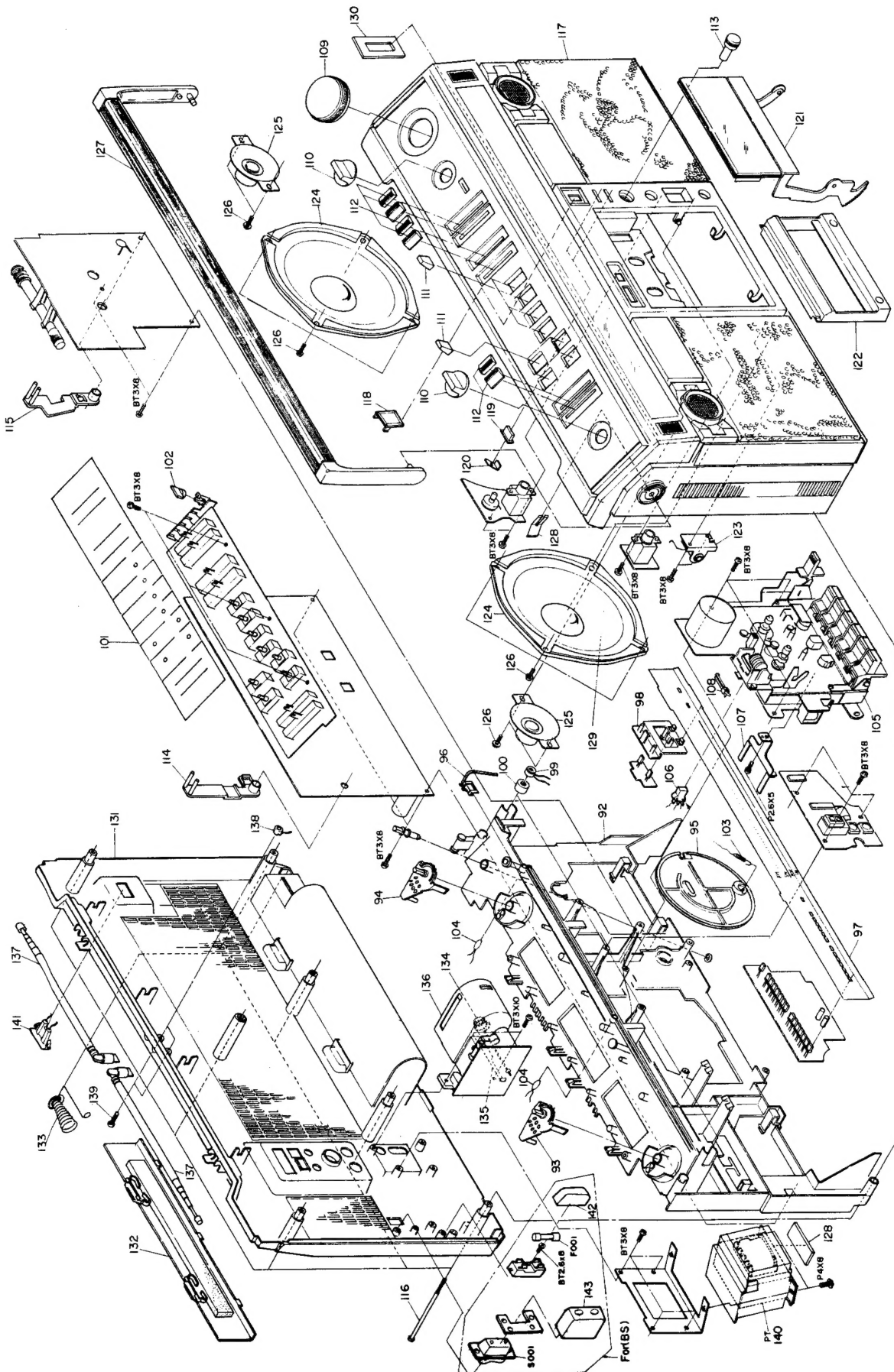
SYMBOL-NO	P-NO	DESCRIPTION	SYMBOL-NO	P-NO	DESCRIPTION
FOR CASSETTE DECK ASSEMBLY (A)			91	5642911	DC SOLENOID
40	6767611	AUTO LEVER	FOR CASSETTE DECK ASSEMBLY (B)		
41	7571351	COLLAR	92	6759121	CHASSIS ASSEMBLY
42	6431481	CAM GEAR	93	6758572	FUNCTION LEVER
43	7552701	FULL AUTO CAM SHAFT	94	6758571	BAND SELECT LEVER
44	6346331	AUTO PULLY	95	6345672	PULLEY-160MMD
45	7340161	RF IDLER ASSEMBLY	96	6394463	POINTER
46	7571361	COLLAR FOR RF IDLER ARM	97	6470771	SCALE PLATE (E)
47	7340301	KICK LEVER		6470772	SCALE PLATE (BS)
48	6767601	MOTOR HOLDER	98	6759021	LED HOLDER
49	6428261	DC MOTOR ASSEMBLY	99	5421571	BUILT IN MICROPHONE
50	6589901	RUBBER CUSHION	100	6570291	MIC COVER
51	7782191	SPECIAL SCREW	101	7766323	SPACER
52	7788011	WASHER FOR FLYWHEEL	102	6053212	PUSH BUTTON ASSEMBLY (LOUDNESS)
53	6374041	FLYWHEEL	103	6316231	SPRING M
54	7340281	FLYWHEEL SUPPORT ASSEMBLY	104	5762281	LAMP
55	7782181	ADJUST SCREW FOR FLYWHEEL	105	7333741	BUTTON HOLDER ASSEMBLY
56	7339001	SWITCH FUNCTION LEVER	106 (S13)	5632412	MICRO SWITCH
57	7340271	TIMER STANDBY HOLDER ASSEMBLY	107	7333761	RECORD SPRING ASSEMBLY
58	7340291	TIMER SETTING OFF LEVER ASSEMBLY	108 (S20)	5603112	LEAF SWITCH
59	7598381	COLLAR	MISCELLANEOUS		
60	7340181	TIMER STANDBY LEVER ASSEMBLY	109	6283385	TUNING KNOB ASSEMBLY
61	7339021	MOOD LOCK LEVER	110	6283395	KNOB ASSEMBLY (FUNCTION, BAND)
62	6520461	BACKTENSION SPRING	111	6296853	LEVER KNOB
63	6520471	SPRING FOR CAM GEAR	112	6295554	SLIDE KNOB
64	6535101	SPRING FOR RECORD PREVENTION ARM	113	6283451	KNOB-14MMD (MIC VOLUME)
65	6542041	SPRING FOR PLAY IDLER	114	6759002	FUNCTION LEVER
66	6542051	SPRING FOR SHUT OFF LEVER	115	6759012	BAND SELECT LEVER
67	6542061	SPRING FOR SWITCH FUNCTION LEVER	116	7781148	BT SCREW-3MMDX50MM
68	6542071	SPRING FOR REVIEW/CUE PLATE	117	6104192	FRONT CASE ASSEMBLY
69	6542081	SPRING FOR PAUSE LEVER	118	6203922	WINDOW
70	6542091	SPRING FOR RF IDLER ARM	119	6053013	PUSH BUTTON
71	6542101	SPRING FOR PLAY LEVER	120	6533491	BUTTON SPRING
72	6542111	SPRING FOR STOP LEVER	121	6092697	CASSETTE LID ASSEMBLY
73	6542121	SPRING FOR CASSETTE LOCK LEVER	122	6182206	HEAD COVER ASSEMBLY
74	6542131	SPRING FOR TIMER STANDBY LEVER	123	7324884	DAMPER ASSEMBLY
75	6542141	SPRING FOR TIMER STANDBY LEVER	124	5407422	SPEAKER-16CM
76	6542151	SPRING FOR LOCK PLATE	125	5401122	SPEAKER-5CM
77	6542161	SPRING FOR MOOD LEVER	126	7781133	BT SCREW-3MMDX8
78	6542171	SPRING FOR REVIEW/CUE LEVER	127	6333648	HANDLE ASSEMBLY
79	6547151	SPRING FOR HEAD PLATE	128	6531143	SPRING
80	6547161	SPRING FOR RECORD PREVENTION LEVER	129	7668403	CUSHION
81	6547171	SPRING FOR TIMER SETTING OFF LEVER	130	6563071	RUBBER FOR MIC
82	6547181	SPRING FOR LATCH PLATE	131	6104172	REAR CASE ASSEMBLY (E)
83	6547191	SPRING FOR PRESSURE ROLLER		6104173	REAR CASE ASSEMBLY (BS)
84	6547201	SPRING FOR KICK LEVER	132	6173454	BATTERY LID ASSEMBLY
85	6547211	SPRING FOR LATCH PLATE	133	6305691	BATTERY TERMINAL (+,-)
86	6547221	SPRING FOR LEVER	134	6305702	BATTERY SPRING (-)
87	6547231	SPRING FOR BRAKE PLATE	135	7451491	BATTERY TERMINAL (+)
88	6534841	CASSETTE HOLDER SPRING	136	6758591	TERMINAL HOLDER
90	5603541	LEAF SWITCH			

EXPLODED VIEW



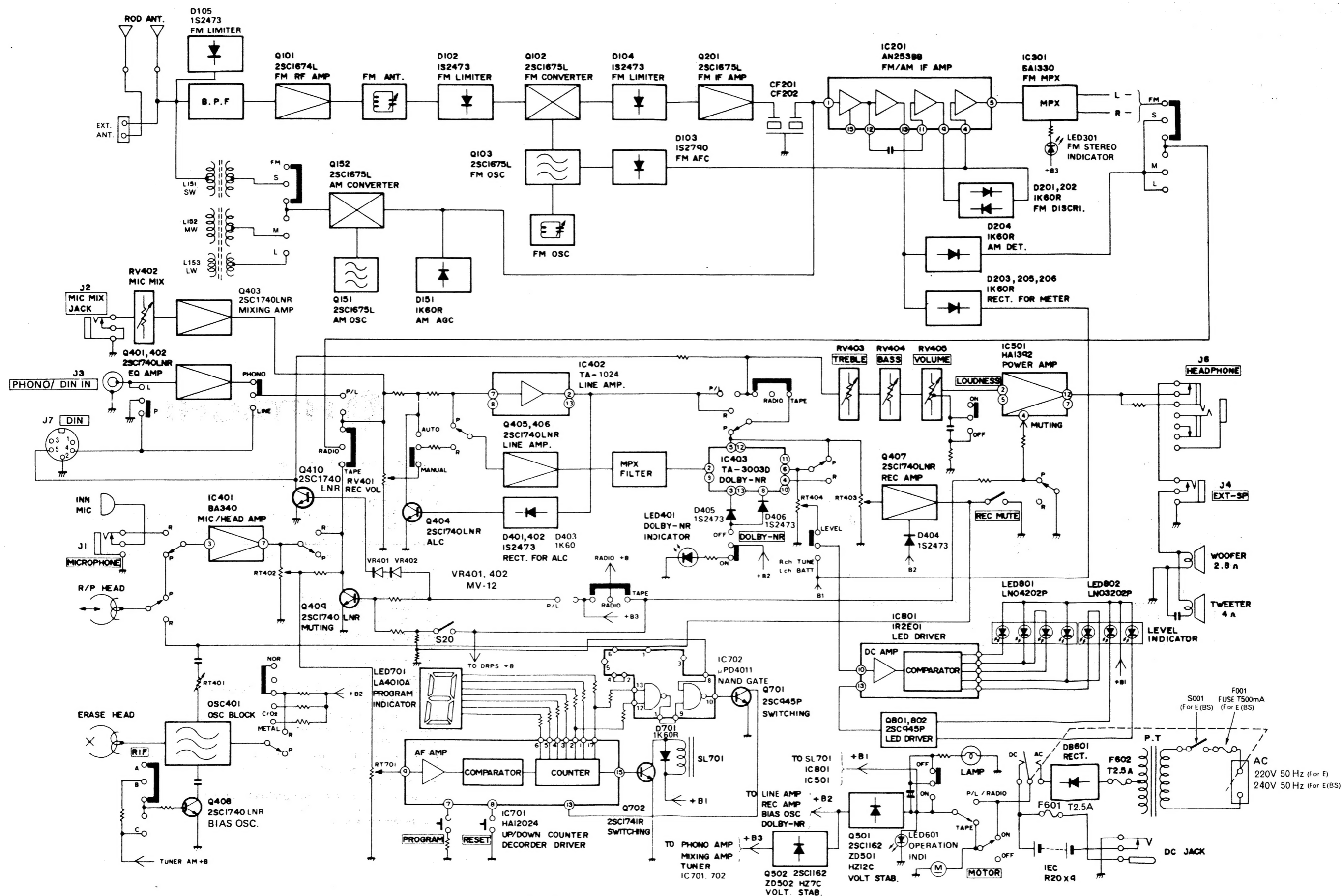
Note: Components marked without numbers in this drawing are not specified as replacement parts.

EXPLODED VIEW









Note: Components marked without numbers in this drawing are not specified as replacement parts.

BLOCK DIAGRAM



TRK-8290E, E(BS) TRK-8290E, E(BS)

SYMBOL-NO	P-NO	DESCRIPTION	SYMBOL-NO	P-NO	DESCRIPTION
MISCELLANEOUS			5212683		POWER TRANSFORMER (BS)
137	5752511	ROD ANTENNA	141	5671661	FM ANTENNA JACK
138	5687142	CAP TERMINAL	142	6746881	FUSE COVER (BS)
139	8744414	BIND SCREW-3MMDX14MM	143	6746902	SWITCH COVER (BS)
△ 140	5212682	POWER TRANSFORMER (E)			

Type of head				
P	Pan head screw		BT	Binding head tapping screw
F	Flat countersunk head screw		BL	Bolt
B	Binding head screw		W	Washer
T	Round head tapping screw		E	"E" ring
Length (L mm)				
Diameter (D mm)				

When ordering hardware excluding stated on these lists, be sure to make your orders with type and size.



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